

for ant. 1951

OFFICE OF THE
SENIOR MEDICAL OFFICER-IN-CHARGE,
HEALTH DEPARTMENT,
ZANZIBAR,

1st June, 1951

SIR,

I have the honour to submit for the information of His Excellency the British Resident and for transmission to the Right Honourable the Secretary of State, the Medical Report on the Health and Sanitation conditions of the Zanzibar Protectorate for the year 1950.

I have the honour to be,

Sir,

Your obedient servant,

C. R. C. RAINSFORD,
Senior Medical Officer-in-Charge, Health Department

THE HONOURABLE
THE CHIEF SECRETARY TO THE GOVERNMENT,
ZANZIBAR



Digitized by the Internet Archive
in 2019 with funding from
Wellcome Library

<https://archive.org/details/b31479972>

fe. act.
1079/51

ZANZIBAR PROTECTORATE

Medical and Sanitary Report

for the year ended

31st December, 1950

SECTION I.—ADMINISTRATION: GENERAL REVIEW

STAFF

Dr. Purnell, Specialist Officer, and Dr. Tallack, proceeded on vacation leave in July, 1950, and Dr. Merson proceeded on leave prior to transfer to Tanganyika. Dr. Young returned from leave in June, and was appointed Acting Specialist Officer and Medical Superintendent-in-Charge, Mental Hospital. Dr. Jones-Hughes arrived on first appointment in June, and was posted to Pemba as District Medical Officer and Medical Officer of Health, Pemba. Dr. Rainsford took over the duties of Medical Officer of Health, District Medical Officer-in-Charge District Dispensaries, and Port Health Officer in addition to his duties of Senior Medical Officer-in-Charge, Medical and Sanitary Services.

Mr. Goram, Sanitary Inspector-Teacher, went on leave in April, 1950, prior to transfer to Kenya. He is not being replaced.

Miss Beecroft, Matron, returned from leave in April, 1950, and two new Nursing Sisters, Miss Tighe and Miss Rowlinson, arrived on first appointment during July, 1950. Miss Allen, Nursing Sister, proceeded to the United Kingdom in September to take the Sister-Tutor course in Edinburgh.

Mr. Soud Mohamed Kharusi, Assistant Dental Surgeon, having completed his studies in England and obtained the L.D.S. Diploma returned in June, 1950.

Mr. Fowzy Salim Bussaidy having obtained his diploma at Makerere was appointed as Assistant Medical Officer in January, 1950.

Mr. Said Mahfuth bin Gurnah, Assistant Medical Officer, continued his studies of Radiology in the United Kingdom during the year.

Mr. Dina Nath Koura, Sub-Assistant Surgeon, was promoted to the post of Senior Sub-Assistant Surgeon in 1950.

TRAINING OF NON-EUROPEAN PERSONNEL

Systematic training of Sanitary Inspectors ceased when the European Sanitary Inspector proceeded on leave in April, 1950. Nevertheless eight candidates all of whom, had had instruction sat for the examination of the Royal Sanitary Institute held in December, 1950, in Zanzibar, out of whom only two passed. This was not unexpected as these men had all failed at previous attempts. It is thought that in future it would be more economical to have Sanitary Inspectors trained in Kenya or Uganda.

The training of Hospital Attendants and Nurses is the same for both categories; hospital attendants are male nurses. The training course extends over three years. At the final examination held in December, 1950, seven passed. The external examiner was very satisfied with the standard reached.

The course of training Midwives is normally of two years, but a trained Nurse can complete it in one year. Five passed the final examination in December, 1950 (two are trained nurses).

DISTINGUISHED VISITORS

Dr. Lloyd Rusby, M.A., D.M., F.R.C.P., Professor H. J. Seddon, F.R.C.S., L.R.C.P., M.B.B.S., and Dr. H. J. Peel, M.A., B.M., F.R.C.S., F.R.C.O.G., of the Nuffield Panel visited Zanzibar during the year. Professor F. J. C. Cambournac of the World Health Organization, Professor J. F. Brock, M.R.C.S., M.R.C.P., B.M., B.Ch., D.M., from Cape Town University, and Dr. D. M. Blair from Southern Rhodesia also visited Zanzibar during the year.

Useful discussions took place with all these eminent visitors. We are especially indebted to Dr. Lloyd Rusby and Professor Seddon for advice and encouragement in respect of our control of Tuberculosis campaign.

HOSPITALS

A.—Buildings

(i) Minor alterations were carried out at the Zanzibar Hospital to enable the old female out-patient department to be transferred to the "Septic Block". This was necessary as the old female out-patient building had to be demolished to make room for the new hospital. A contract for the construction of the new hospital was signed.

(ii) The new forty-bed ward at Wete Hospital, Pemba, was completed and opened by His Highness the Sultan on 18th March, 1950. The new operating theatre was finished in June, 1950, and a new kitchen in October, 1950.

(iii) A new Maternity Hospital (six beds) was completed and opened at Makunduchi, forty miles from Zanzibar, by Her Highness the Sultana in August, 1950. It is proving very popular, eighty in-patients and 106 ante-natal cases being treated up to the end of December, 1950.

B.—General

The working of the hospitals was maintained and the number of in-patients treated was 6,011 compared with 6,228 in 1949.

DISPENSARIES

The number of patients treated in dispensaries was—

New cases	...	...	...	54,603
Re-attendances	...	...	...	134,718

MATERNITY AND CHILD WELFARE

The services were satisfactorily maintained. There were 543 confinements in Government hospitals compared with 490 in 1949.

SCHOOL MEDICAL AND DENTAL SERVICES

The school dental services having been in abeyance for two years recommenced in the middle of the year on the return of the Assistant Dental Surgeon to duty on the 5th June, 1950. The school dental inspections were carried out for the year and out of 5,723 children inspected, 3,121 children were found to be dentally unfit.

TUBERCULOSIS

A tuberculosis service was conceived during 1950 and its birth in 1951 is eagerly awaited.

Its conception was carefully planned and its pre-natal development anxiously watched by members of the department advised by several distinguished consultants.

It is confidently hoped, therefore, that the new child will be born healthy and will grow vigorously until it reaches maturity as a full-blooded tuberculosis service.

The main features of this scheme are—

1. (i) The erection of a sanatorium of 30 to 40 beds. To this end an old school was taken over at Dole, thirteen miles from Zanzibar, and the work of adapting it to a Sanatorium was almost complete by the end of the year. The site which is on relatively high ground is an excellent one with ample room for expansion.

(ii) It has the additional advantage of being within a mile of an agricultural farm.

2. An additional Medical Officer has been sanctioned in the 1951 Estimates to enable us to put one Medical Officer on full-time tuberculosis duties. He will take charge of the sanatorium and will carry out a tuberculin survey and advise regarding the use of B.C.G. vaccine.

SECTION II.—PUBLIC HEALTH

1. RETURNS

The total number of patients seen at hospitals and dispensaries during the last five years was as follows:—

	1946	1947	1948	1949	1950
New cases ...	125,557	131,955	138,939	127,816	133,216
In-patients ...	6,643	7,257	6,819	6,228	6,011
Total attendances ...	430,331	525,473	454,236	304,687	305,597
Deaths in Hospitals ...	504	482	376	318	357

The principal causes of deaths in Government hospitals were—

Tuberculosis ...	14
Dysentery ...	3
Tetanus ...	9
Malaria ...	20
Pneumonia ...	38
Diseases of the blood and blood-forming organs	30
Diseases of the skin, cellular tissue, bone and organs of locomotion ...	32
Ankylostomiasis ...	18
Diseases of the circulatory system ...	31

2. GENERAL DISEASES

1. *Epidemic, endemic and infectious diseases.*—In this group there were 22,270 cases with 70 deaths.

2. *General diseases.*—2,884 cases were recorded.

3. *Diseases of nervous system and organs of sense.*—6,363 cases were treated. The majority 4,865 were diseases of the eye including 14 cases of trachoma.

4. *Affections of the circulatory system.*—287 cases were reported including 139 of heart disease with 27 deaths.

5. *Affections of the respiratory system.*—In this large group of 9,029 there were 667 cases of pneumonia with 38 deaths. This compares with 696 cases and 47 deaths in 1949.

6. *Affections of the digestive system.*—There were 11,538 cases in this group including 624 of hernia.

7. *Diseases of the genito-urinary system.*—2,814 cases of non-venereal diseases of the genito-urinary system were treated.

8. *Puerperal state and diseases of infancy.*—186 cases were reported.

9. *Affections of the skin, cellular tissue and organs of locomotion.*—17,530 cases were recorded. They included tropical ulcers, septic conditions of the skin and myalgia.

10. *Affections produced by external causes.*—There were 9,836 cases the majority being minor injuries.

COMMUNICABLE DISEASES

(A) INSECT-BORNE

Malaria.—8,832 cases were recorded, of these 597 were treated as in-patients with twenty deaths. The corresponding figures for 1949 were 8,222 cases including 584 in-patients and twelve deaths.

Blackwater.—Six cases were treated during 1950 with no deaths.

Relapsing Fever.—No case was recorded.

Plague.—The Protectorate continues to be free from plague. The usual precautions were taken to prevent its introduction.

(B) INFECTIOUS DISEASES

Smallpox.—There was no case of smallpox reported during the year.

During the epidemic in the Lindi District in Tanganyika special precautions were taken to prevent the disease being introduced into Zanzibar. All passengers from the area were placed under surveillance.

Vaccinations are performed daily at the Health Office, Zanzibar, and in Pemba, mainly in connection with passengers leaving the Protectorate by sea and air. Only the International Certificates are issued.

The following vaccinations were performed:—

Zanzibar township	...	...	...	15,374
Ships and dhows	...	...	...	3,739
				<hr/>
Zanzibar Island	...	...	...	19,113
Pemba	...	...	...	792
				<hr/>
Total	...	...	...	19,905
				<hr/>

Tuberculosis.—210 cases attended Government hospitals. Admissions to hospitals numbered 95 and there were 14 deaths.

The District Sanitary Inspectors in Zanzibar Township regularly visited all cases in their areas at monthly intervals to ascertain condition of patients and change of domicile, and to ensure that preventive measures were being carried out. Disinfectant was issued for the treatment of infected sputum.

Family contacts of the patients were medically examined for the detection of early infections.

The Local Welfare Society was informed of all cases to enable their staff to render any assistance found necessary on investigation.

Leprosy.—The Leper Settlements at Welezo (Zanzibar) and Makondeni (Pemba) were maintained as in previous years.

The number cared for was as follows:—

	<i>Welezo</i>	<i>Makondeni</i>
Remaining on 31st December, 1949	52	52
Admitted during 1950	10	2
Discharged	1	—
Died	12	4
Transferred to Welezo Institute	—	1
Remaining on 31st December, 1950	49	49

Welezo

The management of the Welezo Leper Institute remains under the care of the Roman Catholic Mission.

The completion of two new stone houses at the Leper Settlement has provided better accommodation for four leper families. Those patients who are capable of working are employed by the Mission and paid.

The completion of one new house will provide accommodation for six boys (servants).

Makondeni (Pemba)

Staff and accommodation remained unchanged from 1949.

The Sanitary Inspector, Wete, supervises the running of the settlement and a Hospital Orderly is in actual charge and lives on the spot.

Some of the inmates are employed for work in the settlement and are being paid from public funds.

They are as follows:—

Cleaners	...	...	4
Dressers	...	...	1
Cook	...	...	1
Dhobi	...	...	1
Gardener	...	...	1
Water carrier	...	...	1
Wood chopper	...	...	1
Market boy	...	...	1
Herdsmen	...	...	1 (non-leper).

It has been necessary to carry out extensive repairs to the buildings because of damage by white ants.

The District Medical Officer, Pemba, visits the settlement once a week, all patients are seen in rotation as a routine and any cases requiring extra attention are seen whenever necessary.

Specific treatment with "Alepol" is given to selected cases, but a supply of Sulphone is expected shortly.

VITAL STATISTICS.

<i>Population—</i>				
1949 Census	...	...	...	268,508
Add births	...	...	5,514	...
Immigrants	...	...	32,915	38,429
<hr/>				
Total	...	...	...	306,937
Deduct deaths	...	...	4,283	...
Emigrants	...	...	30,592	34,875
<hr/>				
Total estimated population for 1950	...	...	...	272,062

Births and deaths.—A total of 3,582 births and 2,719 deaths were recorded in Zanzibar, and 1,932 births and 1,564 deaths registered in Pemba. Birth rate 20.40 per thousand. Death rate 15.81 per thousand.

Infantile mortality.—459 deaths of children under one year were registered. Infantile mortality rate 83.24 per thousand live births.

Still-births.—52 still-births were registered. Still-birth rate 9.43 per thousand births.

Maternal mortality.—Six maternal deaths were registered. Maternal mortality rate 1.40 per thousand.

SECTION III.—HYGIENE AND SANITATION

Mosquito Control

Inspection of Premises.

	<i>Zanzibar township</i>		<i>Protective belt outside township</i>	
European	...	6,364	...	202
Indian	...	119,200	...	368
Arab	...	65,997	...	744
African	...	216,163	...	17,374
Other	...	36,162	...	—
Vacant houses	...	9,983	...	694
Mosques and temples	...	6,253	...	630
<hr/>				
		460,122		20,012

Other Inspections:

	<i>Zanzibar township</i>		<i>Protective belt outside township</i>	
Sullage and cesspits	...	172,147	...	8,778
Drains	...	17,647	...	1,899
Gully traps	...	60,378	...	903
Roof Gutterings	...	2,580	...	69
Borrow-pits	...	933	...	3,680
Swamps	...	43	...	461
Crab holes	...	113,312	...	4,486
Anti-malaria drains	...	2,793	...	1,506
Dhows on beach	...	196	...	1,369
Boats	...	1,556	...	1,248
Wells and water holes	...	1,904	...	3,649
Pools	...	1,873	...	4,854
Gardens	...	13,307	...	529
Graveyards	...	7,673	...	851
Open lands	...	17,039	...	5,893
Trees	...	9,247	...	60,781
Mosquito traps	...	126	...	—
<hr/>				
		422,754		100,956

Breeding places found:

		Zanzibar township		Protective belt outside township
Anopheles	...	90	...	173
Aedes	...	1,050	...	102
Culex	...	376	...	190
		<hr/> 1,516		<hr/> 465

Adult Mosquitoes caught in control stations:

		Zanzibar township		Protective belt outside township
Anopheles	...	164	...	46
Aedes	...	158	...	78
Culex	...	5,651	...	726
		<hr/> 5,973		<hr/> 850
Aedes Index (per cent)		0.22		0.03

Action taken:

			Zanzibar township		Protective belt outside township
Notice for abatement served	...	...	1,110	...	41
Prosecutions for failure to abate	...	...	11	...	—
Earth drains or ditches cleaned and graded (linear feet)	...	...	—	...	54,450
Low-lying land raised (square yards)	...	...	3,438	...	—

The following number of oilings were made:—

					Zanzibar township		Protective belt outside township
Drains	...	...	...	...	644	...	45
Tanks	...	...	...	...	118	...	—
Cesspits	...	...	...	...	22,157	...	52
Sullage-pits	...	...	...	...	5,543	...	—
Swamps and pools	...	...	...	...	736	...	149
Pools or excavations filled in	...	...	...	...	26	...	—
Holes in trees filled in	...	...	...	...	1	...	12
Crab holes oiled and filled in	...	...	...	...	864	...	4,486
Crab holes found containing larvæ	...	...	...	...	315	...	—
Dead crabs found after being poisoned	...	...	...	...	1,971	...	—
Spraying of swamps, pools and rice fields with paris green	...	...	...	...	—	...	28
Eaves and gutters removed or re-aligned	...	...	...	...	1	...	—
Water tanks rendered mosquito-proof	...	...	...	...	4	...	—
Bush and undergrowth cleared (square yards)	...	...	...	...	4,715,517	...	407,200
Shells, coconut husks, tins, etc., removed	...	...	...	...	—	...	54,715
Premises sprayed with D.D.T. solution	...	...	...	...	75	...	—

There was a considerable decrease in the number of Aedes breeding places found in the township.

ZANZIBAR PRISONS—YEARLY TOTALS OF ADULT MOSQUITO CATCHES

First Offenders Block

	<i>Wet days</i>	<i>Rainfall</i>	<i>Anopheles</i>	<i>Culex</i>	<i>Aedes</i>
1946	1,467	2
1947	752	—
1948	524	—
1949	744	—
1950	1,078	1

ZANZIBAR PRISONS---ADULT MOSQUITO CATCHES DURING THE YEAR 1950

ASIATIC

FIRST OFFENDERS		OLD OFFENDERS		ASIATIC		Total	
<i>Anopheles</i>	<i>Culex</i>	<i>Anopheles</i>	<i>Culex</i>	<i>Anopheles</i>	<i>Culex</i>	<i>Anopheles</i>	<i>Culex</i>
47	1,078	1	—	—	—	165	2,771
							1

ADULT MOSQUITOES CAUGHT IN SIX CONTROL STATIONS, ZANZIBAR TOWNSHIP

Year	(1) N. E. Boundary			(2) N. Boundary			(3) S. Boundary			(4) W. Boundary			(5) S. E. Boundary			(6) Central		
	N. E. Boundary			N. Boundary			S. Boundary			W. Boundary			S. E. Boundary			Central		
	Anopheles	Aedes	Culex	Anopheles	Aedes	Culex	Anopheles	Aedes	Culex	Anopheles	Aedes	Culex	Anopheles	Aedes	Culex	Anopheles	Aedes	Culex
1943	...	10	197	...	...	225	159	3	237	...	...	138	...	17	109	...	...	...
1944	...	5	104	...	3	80	51	1	248	...	...	157	...	7	94	...	...	...
1945	...	5	94	...	...	49	...	1	240	...	...	103	...	4	106	...	...	...
1946	...	8	100	...	15	36	6	42	127	...	...	72	...	11	48	...	...	...
1947	...	4	84	...	14	57	...	56	151	...	3	48	...	8	47	...	...	...
1948	...	4	138	...	1	178	2	36	93	...	5	32	...	4	65	...	...	...
1949	110	...	...	63	...	3	153	...	..	18	...	...	54	...	...	...
1950	78	...	...	39	...	...	85	2	...	39	2	...	79	...	...	...

ADULT MOSQUITOES CAUGHT ON WEEKLY VISITS IN CONTROL STATIONS IN ZANZIBAR TOWNSHIP, 1950

" A "			" B "			" C "			" D "			" E "			" F "		
Sanitary District			Sanitary District			Sanitary District			Sanitary District			Sanitary District			Sanitary District		
A	C	S	A	C	S	A	C	S	A	C	S	A	C	S	A	C	S
...	117	...	...	66	...	...	53	...	...	39	...	2	40	...	...	301	...

ADULT MOSQUITOES CAUGHT ON DAILY VISITS IN SPECIAL CONTROL IN ZANZIBAR TOWNSHIP, 1950

Sanitary District			Sanitary District			Total		
A	C	Ae.	A	C	Ae.	A	C	Ae.
...	2,465	...	...	2,466	...	...	4,931	...

Protective Barrier

All houses in the half-mile protective belt outside the town boundary were sprayed with D.D.T. wettable powder, during February, June and October, 1950.

Check on Preventive Measures

During the year commencing from March, six control stations have been set up, three within and three outside the town. These were sprayed with pyrethrum solution once a week.

Immediately after spraying the following dead mosquitoes were collected:—

Inside Town Boundary									Outside Town Boundary								
Mental Hospital			Hut No. 37/60			Hut No. 24/17			Hut No. 1 Mazizini			Hut No. 177 Makunduchi Road			Hut No. 380 Marahubi		
A	C	S	A	C	S	A	C	S	A	C	S	A	C	S	A	C	S
0	16	0	0	313	0	0	122	1	0	161	0	5	47	0	1	47	0

Malaria in Europeans

These are confirmed cases with parasites present in the blood. These figures are for Zanzibar only (Pemba not included).

In-patients

1944		1945		1946		1947		1948		1949		1950
73	...	56	...	27	...	22	...	13	...	7	...	9

Out-patients

1944		1945		1946		1947		1948		1949		1950
90	...	64	...	41	...	38	...	33	...	12	...	10

INFECTIOUS DISEASES

The following table is a comparison of the more important infectious diseases notified for the past five years:—

		1946	1947	1948	1949	1950
Chicken-pox	...	102	195	44	421	131
Diphtheria	...	2	5	7	4	—
Dysentery, amœbic		87	83	69	83	89
„ bacillary		23	15	38	14	34
German measles	...	13	7	9	—	1
Leprosy	...	17	7	20	20	12
Measles	...	7	77	52	37	6
Mumps	...	16	2	4	40	34
Puerperal fever	...	—	1	1	—	14
Relapsing fever	...	53	3	1	2	1
Tuberculosis	...	101	120	125	168	135
Typhoid fever	...	8	9	13	12	11
Whooping cough	...	6	46	24	59	45

LICENSED PREMISES

All licensed premises were continued as usual to be annually inspected before the issue of licences were recommended by the Health Officer. The co-operation of the Municipal Officer has been of great assistance in carrying out of this important work during the year.

This work involved the inspection of 101 eating houses, 15 houses-let-in-lodgings, 29 laundries, 10 bakehouses, 11 dairies and one communal rest house and the issue of notices when the premises were found to be below the required legal standard.

FACTORIES

District Sanitary Inspectors continued to carry out their duties as Inspectors of Factories under the Factories (Supervision and Safety) Decree, 1943, and regularly visited the premises.

Notices were served for the remedy of defects affecting the health and safety of the persons employed.

GENERAL MEASURES OF SANITATION

(a) Sewage Disposal and Drainage Improvements in Sanitation of Private Houses

Gradual progress has continued in converting insanitary pit latrines into water-flushed closets, although there is still a shortage of the necessary materials.

Nineteen septic tanks were constructed by private owners and forty water-flushed closet pans installed. 1,820 feet of 4-inch and 325 feet of 6-inch glazed earthenware drain pipes were laid and 277 feet of 4-inch iron soil pipes and 80 feet of 3-inch iron waste pipes were fixed.

This enabled 20 cesspits, and 29 sullage pits to be abolished and filled in.

In many cases the work was only performed after long and tedious law cases.

(b) Scavenging and refuse disposal

This service is controlled by the Medical Officer of Health, Zanzibar, and in Pemba by the District Medical Officer.

Most of the refuse is disposed of by controlled tipping.

Altogether 106,515 cart-loads were dealt with during 1950.

CONTROL OF FLIES

Locally made fly traps are extensively used in all areas. A fly searcher also visits all districts in Zanzibar township to discover any breeding places, which are immediately dealt with.

Number of fly traps used:—

Zanzibar Town	...	...	...	54
Zanzibar Rural Districts	...	...	...	29
Pemba ...	...	...	...	28

Number of fly breeding places detected:—

Deposits of refuse	...	...	...	43
Trapped gullies	...	...	...	12
Cowdung	...	...	...	6
Dead animals	...	...	...	13
Animal excreta	...	...	...	5
Human excreta	...	...	...	3
				<hr/> 82 <hr/>

The meat and fish sections of the central market were sprayed with D.D.T. solution during the year, and resulted in a considerable reduction of flies.

IMMUNISATION AGAINST YELLOW FEVER

During 1950, 3,270 people were immunised against yellow fever. Yellow fever certificates issued were in accordance with the International Sanitary Convention.

Also 427 persons were immunised against cholera, and 267 persons against typhoid before proceeding overseas.

HOUSING AND TOWN-PLANNING, ZANZIBAR TOWNSHIP

Inspections and recommendations were made in connection with the following applications made to the Joint Building Authority.

STONE BUILDINGS

<i>Applications with plans</i>	1947	1948	1949	1950
Erections of new buildings	8	15	23	26
Major alterations and additions including drainage to existing buildings ...	102	104	115	100
<i>Applications without plans</i>	1947	1948	1949	1950
Alterations and additions	221	132	256	257
Permits refused	5	8	4	5
Notices served for unauthorised works ...	24	9	23	14
Notices served for dangerous structures ...	97	102	190	116

NATIVE-TYPE BUILDINGS

	1947	1948	1949	1950
Erection of new huts	320	166	137	170
Reconstruction and extension of existing huts	372	584	245	227
Repairs to existing huts	751	634	1,366	1,420
Notices served for unauthorised works ...	—	23	34	54
Notices served for demolition	—	12	6	10

RUINOUS OR INSANITARY HUTS DEMOLISHED

	1947	1948	1949	1950
Stone Town	11	9	23	—
Ngambo	123	114	80	25

FOODSTUFFS IN RELATION TO HEALTH AND DISEASE

All licensed premises dealing with food such as eating houses, bake-houses, milk shops, etc., and markets were regularly inspected, and the necessary improvements effected where found necessary. One hundred and seventy-four notices were served in connection with these improvements.

Licensed hawkers of food were kept under strict observation, and all their utensils had to be approved and stamped by the Health Office staff before use. This work involved the checking of two hundred and forty hawkers.

Three hundred and seven samples of milk were taken for chemical analysis. Out of these 112 from the town dairies and 195 from the milk vendors from the rural districts. In addition 18,387 lactometer tests were carried out at the milk depot, where milk brought from the rural areas is presented for inspection and sealing of milk cans before sale.

Sixty milk vendors were taken to court and convicted for selling milk below the legal standard.

Foodstuffs in the markets and throughout the town were frequently inspected. The following include some of the items found unfit for human consumption:—

Meat	...	...	108 lb.
Vegetables	...	...	18,785 „
Fruits	...	...	920 „
Grain	...	...	7,200 „
Onions	...	...	128,938 „
Potatoes	...	...	4,446 „
Tinned foods	...	...	1,121 „
Mixed beans			
(Maharagwe)	...		124 „
Beans (Kunde)	...		1,260 „
Chocolates and Sweets	...		2,080 „

PEMBA

PUBLIC HEALTH IN PEMBA

This was under the direct control of the District Medical Officer, Pemba.

Sanitary Inspectors are posted at Wete, Chake-Chake, Mkoani and Konde.

Anti-Malarial Measures.—During the year 300 yards of earth drains were laid, 950,669 square yards of bush cleared and 1,594 trees were planted.

Mosquito Control.—The following numbers of mosquitoes were caught in control stations:—

<i>Anopheles</i>		<i>Aedes</i>		<i>Culex</i>
38	...	1,578	...	4,473

Sewage Disposal and Drainage.—Seven W.C.s were constructed and 227 feet of earthenware pipe drains were laid. Four septic tanks constructed and twenty six emptied.

Scavenging.—22,623 cartloads of refuse were removed and disposed of by controlled tipping.

Infectious Diseases.—No serious epidemic occurred, but 70 cases of Lobar Pneumonia were notified.

Vaccinations.—792 small-pox vaccinations were performed.

Immunisation against Yellow Fever.—During 1950, 370 people were inoculated against yellow fever in Pemba.

Inspection of foodstuffs.—The following were condemned:—

Milk	...	...	191 gall.
Meat	...	...	419 lb.
Fish	...	...	806 „
Beans	...	...	1,050 „
Mtama	...	...	327 „
Fruit and vegetables	...		511 „
Onions	...	...	82 „
Mandazi	...	...	9 „
Copra	...	...	159 „

Housing.—The following is a summary of the work done:—

Total number of building applications	...	...	433
To build huts	...	...	153
To build stone buildings	...	...	18
To repair huts	...	...	232
To repair stone buildings	...	...	16
To re-build huts	...	...	14
Demolitions	...	...	11

PUBLIC HEALTH WORK IN RURAL AREAS

A trained Sanitary Inspector was posted to the village of Chwaka during the year. A piped water supply is being constructed here and it is expected that the village will develop rapidly.

The Sanitary Inspectors at Makunduchi and Mkokotoni continued their routine duties.

SCHOOL MEDICAL AND DENTAL SERVICES

The improved staff position enabled the school medical examinations to be reinstated. 1,706 pupils were examined in Zanzibar, and 369 in Pemba.

The school dental service which was discontinued in 1948 was re-started in July this year both in Zanzibar and Pemba.

AMBULANCE SERVICE

During the year 1,060 patients were collected from the rural districts by ambulance and brought to the hospital for treatment. This work involved a total mileage of 12,794 in Zanzibar and 6,353 in Pemba.

A new Austin A40 ambulance arrived in October, and was sent to Pemba to replace the borrowed truck which has been used for months.

SECTION IV—PORT AND AERODROME HEALTH WORK AND ADMINISTRATION

The following is the record of these sections during the year 1950:—

Port:

Ships which called	...	...	580
Dhows which called	...	...	1,367
Immigrants who arrived by sea	...	...	21,809
Emigrants who left by sea	...	...	19,285
Vaccinations carried out in ships and dhows			3,739

Aerodrome:

Aircraft which landed	...	...	2,937
Immigrants who arrived by air	...	...	11,124
Emigrants who left by air	...	...	11,307

During the course of the careful checking of all health documents the following passengers were found to have arrived either without the necessary vaccination and yellow fever certificates, or their certificates had expired or were otherwise invalid.

Ships' passengers	...	...	...	607
Air passengers	...	...	...	246

DERATISATION OF SHIPS

Four ships were inspected and issued with the International Deratisation Exemption Certificates.

QUARANTINE STATION

Further repairs of buildings on the island were carried out, and the furniture of the bungalows renovated.

The routine cleaning of bush, filling of depressions, levelling of roads, etc., were performed.

During the year no person was placed in quarantine.

SECTION V.—MATERNITY AND CHILD WELFARE

As mentioned in the previous reports clinics for women and children were maintained on both islands.

The following tables show the numbers attending the women's clinic during the past five years:—

Pemba—Wete Clinic:

Ante-natal cases	...	...	123	516	136	554	131	509	154	448
Infant Welfare	...	...	84	450	151	313	65	160	77	204
Total	...	...	207	966	287	867	196	669	231	652

Pemba—Chake Chake Clinic:

Out-patients	...	3,627	12,739	2,917	7,848	3,565	7,317	4,116	8,639	3,750	8,659
Ante-natal cases	...	90	499	62	129	68	223	79	256	140	315
Infant Welfare	...	214	1,571	224	749	224	1,049	139	651	248	766
Total	...	3,931	14,809	3,203	8,726	3,857	8,589	4,325	9,546	4,138	9,740

Wete Maternity Hospital:

Total confinements...	74	|	68	|	109	|	95	|	88
-----------------------	----	--	----	--	-----	--	----	--	----

Chake Chake Hospital:

Total confinements...	57	|	50	|	55	|	42	|	56
-----------------------	----	--	----	--	----	--	----	--	----

ANALYSIS OF MATERNITY CASES

Maternity Hospital Zanzibar

Total confinements	...	...	...	399
Maternal deaths	...	...	...	10
Infant deaths	...	...	...	38
Premature deaths	...	...	...	36
Still born	...	...	...	17
Cæsarian section	...	...	...	3
Forceps deliveries	...	...	...	9
Retained placenta	...	...	...	6
Craniotomies	...	...	...	1

Maternity Home Makunduchi

Total confinements	...	...	...	61
Infant deaths	...	...	...	5
Still births	...	...	...	3
Twins premipara	...	...	...	1
Breach delivery	...	...	...	1
Premature deliveries multipara	...	...	...	4
Premature deliveries primipara	...	...	...	2

Wete

Total confinements	...	...	...	88
Primipara	...	...	...	25
Multipara	...	...	...	63
Normal deliveries	...	...	...	77
Forceps deliveries	...	...	...	3
Cæsarian section	...	...	...	5
Abnormal presentations	...	...	...	2
Craniotomies	...	...	...	1
Maternal deaths	...	...	...	2
Still births	...	...	...	6
Multiple pregnancy	...	...	...	3
Retained placenta	...	...	...	1
Premature births	...	...	...	9

Chake Chake

Total confinements	...	...	...	56
Primipara	...	...	...	15
Multipara	...	...	...	41
Normal deliveries	...	...	...	55
Abnormal presentations	...	...	...	1
Maternal deaths	...	...	...	2
Infant deaths	...	...	...	2
Still births	...	...	...	2
Multiple pregnancy	...	...	...	2
Retained placenta	...	...	...	9
Premature births	...	...	...	1

SECTION VI.—REPORT ON SPECIAL DEPARTMENTS

EYE CLINIC

The Pathologist was in charge of the eye clinic during the year. The following are the totals of cases treated:—

New cases	...	...	...	3,521
Re-attendances	...	...	...	19,893
Vision testing (candidates for Government employment)	...	...	...	610
European cases	...	...	...	29
Total				24,053
Refraction for glasses	...	...	...	107
Operations, major	...	...	...	55
„ minor	...	...	...	65
Cases admitted to hospital	...	...	...	114

LABORATORY

Zanzibar

The work of the Zanzibar Laboratory is briefly summarised as follows:—

Parasitological examinations	...	...	15,915
Bacteriological examinations	...	...	4,955
Serological examinations	...	...	1,904
Histological examinations	...	...	34
Medico-legal examinations	...	...	20
Post-mortem examinations	...	...	29
General (blood biochemical, etc.)	...	...	5,016
Special (Aschein-Zondek, veterinary, etc.)	...	...	8
Total			27,881

Malaria

There was a slight increase of positive blood-films as compared with 1949:—

	1948	1949	1950
P. falciparum	1,502	1,044	1,569
P. vivax	525	196	262
P. malariae	44	22	9
Undefined plasmodiæ	198	145	217
	2,269	1,407	2,057

The demand for crude liver extract prepared in the laboratory for hospital use continues to increase and 162 litres were prepared as against 123 litres in 1949.

One hundred and thirty-three litres of sterile 5 per cent dextrose, 64 litres of 5 per cent dextrose in saline and 88 litres of saline solution were

prepared for hospital use against 15 litres of 5 per cent dextrose in saline in 1949.

Sterile solutions were also prepared for use in the Eye Clinic.

Pemba: Wete and Chake Chake

A notable feature of the year's work was the opening of a laboratory at Wete Hospital, Pemba. The Senior Laboratory Assistant was posted to Pemba in April and under his care work was begun on lines similar to those in use in the Zanzibar Laboratory. A total of 5,593 examinations were carried out during the nine months in which the laboratory was in use.

The total number of examinations performed was:—

			<i>Wete</i>		<i>Chake Chake</i>
Blood films	...	...	2,441	...	1,752
Stool and urine	...	...	1,629	...	2,017
Blood counts	...	...	241	...	—
Smears, sputum, etc.	...	...	351	...	342
			<hr/> 4,662		<hr/> 4,111

REPORT OF DENTAL SURGEON

The following is an approximate summary of some of the work carried out by the Department during the year; it does not include patients treated while hospitalized, for example fractured jaws, etc.:—

				<i>Attendances</i>		<i>Extractions</i>		<i>Fillings</i>		<i>Scaling</i>
Schools	...	...	...	1,002	...	323	...	799	...	6
Native out-patients	...	...	...	7,199	...	8,272	...	—	...	8
Other patients (officials and families and non-officials)	...	...	...	1,952	...	311	...	735	...	186

MENTAL HOSPITAL

No new building has been undertaken at the Mental Hospital during the year 1950. Minor repairs have been done when necessary, and a telephone has been installed in the office.

With the help of a Garden Superintendent from the Agriculture Department, extensive planting has been achieved at the Mental Hospital.

A bougainvillæa hedge has been planted almost round the boundary of the hospital grounds and along the frontage of the male compounds.

An avenue of about 40 royal palms has been planted along the drive from the road to the office. Twenty-one other trees have been planted in the compounds, behind the hospital, and along the road. In addition about 50 ornamental shrubs have been put in.

The following figures show the number of patients treated:—

Remaining on 31st December, 1949	...	115
Admitted	...	57
Discharged	...	37
Deaths	...	12
Remaining on 31st December, 1950	...	123

The hospital diet was revised in July, 1950, effecting a slight reduction in the cost and an improvement in the food itself. The new diet yields the following:—

(1) Protein	88.6 gms. per diem.
(2) Fat	82.2 „ „
(3) Carbohydrate	495 „ „
(4) Calories about	3,000 per diem

The approximate content of vitamins and minerals have also been worked out and are satisfactory.

STAFF IMPROVEMENT

Three male staff nurses were posted to the Mental Hospital, during the year. This number will be augmented when more trained staff pass out from the training school.

WELEZO INSTITUTION

This institution which is under the control of the Sisters of the Roman Catholic Mission has accommodation for (a) the old and infirm, (b) tubercular patients, (c) leprosy patients.

The following figures show the work done during 1950:—

Poor House

Number remaining 31st December, 1949	...	156
„ admitted during 1950	...	163
„ discharged during 1950	...	87
„ died during 1950	...	77
„ remaining 31st December, 1950	...	155

Leper Settlement

Number remaining 31st December, 1949	...	52
„ admitted during 1950	...	10
„ discharged during 1950	...	1
„ died during 1950	...	12
„ remaining 31st December, 1950	...	49

Tuberculosis Asylum

Number remaining 31st December, 1949	...	11
„ admitted during 1950	...	49
„ discharged during 1950	...	17
„ died during 1950	...	36
„ remaining 31st December, 1950	...	6

PRISONS

Zanzibar.—There were 861 new cases and 6,265 re-attendances at the Prison Infirmary during the year.

One hundred and eighteen cases of malaria were recorded. All new prisoners are medically examined and if necessary treated before being put to work.

The following is a summary of the work carried out:—

		<i>Number of persons admitted</i>		<i>Daily average in prisons</i>		<i>Daily average on sick list</i>
Zanzibar	...	264	...	301.95	...	29.09
Pemba	...	32	...	49.90	...	00.95

SECTION VII.—FINANCE

(a) Expenditure, Health Department

	£
Personal Emoluments	50,244
Other Charges :	
General Stores	2,757
Drugs, Dental and Surgical Requisites ...	9,730
Maintenance of Patients	14,333
Sanitation Labour	3,074
Miscellaneous Services	11,676
Total ...	<u>91,814</u>

(b) Expenditure, Municipality

	£
Personal Emoluments	4,328
Other Charges :	
Equipment and Stores	145
Sanitation Labour	9,367
Total ...	<u>13,840</u>

(c) Revenue

	£
Hospital Fees and sale of Drugs ...	3,455
Dental Fees	344
Contribution from dependencies towards Quarantine Station	1,462
Total ...	<u>5,261</u>

SECTION VIII—LEGISLATION AFFECTING THE PUBLIC HEALTH
ENACTED DURING THE YEAR*Public Health Decree (Cap. 60):*

A decree to amend the Public Health Decree No. 28 of 1950.

Dangerous Drugs Decree (Cap. 64):

Dangerous Drugs Order, 1950.

The Mental Patients Decree, 1947:

A decree to amend the Mental Patients Decree No. 26 of 1950.

TABLES I AND II

Return of Diseases and Deaths for the Year 1950

This table includes only those diseases which were diagnosed in hospitals under the charge of a medical officer or assistant medical officer.

DISEASES	Remaining in Hospital at end of Dec. 1949	Yearly Admissions	Total Cases Treated	Total Deaths	Remaining in Hospital on 31st Dec. 1950	All Cases including both In and Out Patients	Total Cases Treated in 1949
1. Enteric Group—							
(a) Typhoid fever ...	2	8	10	2	...	14	19
(b) Paratyphoid fever ...	...	4	4	...	...	8	...
2. Typhus fever ...	...	2	2	...	...	3	...
3. Relapsing fever ...	...	...	...	...	...	...	...
4. Undulant fever ...	...	...	...	...	...	...	...
5. Smallpox ...	...	...	...	...	...	...	...
6. Measles ...	...	1	1	...	...	2	59
7. Scarlet fever ...	...	...	...	...	...	...	...
8. Whooping cough ...	...	...	...	...	...	71	89
9. Diphtheria ...	1	...	1	...	...	1	8
10. Influenza—							
(a) With respiratory complications ...	...	3	3	...	...	4	37
(b) Without respiratory complications ...	...	21	21	...	...	490	370
11. Cholera ...	...	...	...	...	...	...	...
12. Dysentery—							
(a) Amoebic ...	...	65	65	1	5	89	106
(b) Bacillary ...	...	29	29	1	1	79	19
(c) Unclassified ...	...	6	6	1	...	43	41
13. Plague—							
(a) Bubonic ...	...	...	...	...	...	...	...
(b) Pneumonic ...	...	...	...	...	...	...	...
(c) Septicæmic ...	...	...	...	...	...	...	...
14. Acute poliomyelitis ...	...	...	...	...	...	...	...
15. Encephalitis lethargica ...	...	...	...	...	...	...	1
16. Cerebro-spinal fever ...	...	4	4	3	...	6	...
17. Rabies ...	...	...	...	...	...	...	...
18. Tetanus ...	1	7	8	3	...	14	12
19. Tuberculosis of the res- piratory system ...	8	83	91	14	11	200	250
20. Other tuberculous dis- eases ...	...	4	4	...	...	10	6
21. Leprosy ...	...	2	2	...	...	12	28
22. Venereal diseases—							
(a) Syphilis ...	3	46	49	3	4	692	577
(b) Gonorrhœa ...	4	102	106	...	5	795	843
(c) Other venereal dis- eases ...	...	5	5	...	...	70	23
23. Yellow fever ...	...	...	...	...	...	...	...
24. Malaria—							
(a) Benign tertian ...	...	58	58	...	4	164	1,656
(b) Subtertian ...	7	281	288	14	5	1,448	2,431
(c) Quartan ...	...	1	1	...	...	4	8
(d) Unclassified ...	5	245	250	6	4	7,216	4,127
25. Blackwater fever ...	...	5	5	...	...	6	3
26. Kala-azar ...	...	...	...	...	...	...	...
27. Trypanosomiasis ...	...	...	...	...	...	...	...
28. Yaws ...	5	41	46	...	3	5,433	3,953
29. Other protozoal diseases ...	...	4	4	...	...	38	4
30. Ancylostomiasis ...	5	78	83	18	7	3,661	5,354
31. Schistosomiasis ...	...	24	24	...	1	566	718
32. Other helminthic diseases ...	1	18	19	3	3	101	50
Carried forward ...	42	1,147	1,189	69	53	21,240	20,792

TABLES I AND II.—(Contd.)

DISEASES	Remaining in Hospital at end of Dec. 1949	Yearly Admissions	Total Cases Treated	Total Deaths	Remaining in Hospital on 31st Dec. 1950	All Cases including both In and Out Patients	Total Cases Treated in 1949
Brought forward ...	42	1,147	1,189	69	53	21,240	20,792
33. Other infectious and/or parasitic diseases ...	14	147	161	1	1	1,030	660
34. Cancer and other tumours							
(a) Malignant ...	1	21	22	11	5	39	27
(b) Non-malignant ...	...	54	54	7	2	102	96
(c) Undetermined ...	...	1	1	...	...	17	14
35. Rheumatic conditions ...	...	18	18	...	...	539	489
36. Diabetes ...	2	34	36	10	2	78	73
37. Scurvy ...	...	...	...	...	...	...	...
38. Beri-beri ...	...	...	...	...	...	...	3
39. Pellagra ...	...	1	1	1	...	2	2
40. Other diseases—							
(a) Nutritional ...	1	45	46	14	2	236	298
(b) Endocrine glands and general ...	...	...	...	...	...	128	168
41. Diseases of the blood and blood forming organs ...	2	105	107	30	6	1,738	1,568
42. Acute and chronic poisoning ...	...	3	3	...	...	5	8
43. Cerebral hæmorrhage ...	...	...	...	...	...	1	10
44. Other diseases of the nervous system ...	2	57	59	4	2	325	570
45. Trachoma ...	...	2	2	...	...	14	16
46. Other diseases of the eye and annexa ...	5	183	188	1	7	4,851	4,861
47. Diseases of the ear and mastoid sinus ...	1	19	20	...	1	1,172	1,091
48. Diseases of the circulatory system—							
(a) Heart diseases ...	5	65	70	27	4	139	423
(b) Other circulatory diseases ...	2	27	29	4	...	148	100
49. Bronchitis ...	2	92	94	2	1	3,284	3,457
50. Pneumonia—							
(a) Broncho-pneumonia ...	1	39	40	5	2	81	143
(b) Lobar-pneumonia ...	14	303	317	33	7	583	525
(c) Otherwise defined ...	1	...	1	...	...	3	28
51. Other diseases of the respiratory system ...	6	70	76	4	3	5,078	4,489
52. Diarrhoea and enteritis—							
(a) Under two years of age ...	...	1	1	...	...	100	95
(b) Over two years of age ...	1	84	85	3	3	641	588
53. Appendicitis ...	1	16	17	...	1	32	24
54. Hernia and intestinal obstruction ...	11	266	277	14	17	624	572
55. Cirrhosis of the liver ...	...	23	23	3	1	39	22
56. Other diseases of the liver and biliary passages ...	2	44	46	7	4	129	115
57. Other diseases of the digestive system ...	5	179	184	8	6	9,973	10 310
58. Nephritis (all forms)—							
(a) Acute ...	1	5	6	...	1	10	1
(b) Chronic ...	...	7	7	2	...	25	14
Carried forward ...	122	3,058	3,180	260	131	52,406	51,652

TABLES I AND II.—(Contd.)

DISEASES	Remaining in Hospital at end of Dec., 1949	Yearly Admissions	Total Cases Treated	Total Deaths	Remaining in Hospital on 31st Dec. 1950	All Cases including both In and Out Patients	Total Cases Treated in 1949
Brought forward ...	122	3,058	3,180	260	131	52,406	51,652
59. Other non-venereal dis- eases of the genito- urinary system ...	12	359	371	12	18	2,779	2,678
60. Diseases of pregnancy, childbirth and the puer- peral state—	...	...	...	...	...	...	...
(a) Abortion ...	1	64	65	1	2	97	102
(b) Ectopic gestation ...	...	3	3	1	...	4	160
(c) Toxæmias of preg- nancy ...	...	1	1	...	...	7	68
(d) Other conditions of the puerperal state...	1	41	42	5	...	78	163
61. Diseases of the skin, cellular tissue, bones and organs of locomotion ...	58	1,199	1,257	32	50	17,530	17,042
62. Congenital malformations and diseases of early infancy—							
(a) Congenital debility (children under 1 yr.)	..	...	...	...	...	4	11
(b) Premature birth ...	...	...	...	...	...	1	1
(c) Injury at birth ...	...	...	...	...	...	...	...
(d) Others ...	1	2	3	...	...	3	2
63. Senility ...	...	20	20	15	1	127	163
64. External causes—							
(a) Suicide ...	...	...	...	...	...	...	...
(b) Other forms of violence ...	51	461	512	11	25	6,705	5,900
65. Ill-defined causes ...	2	248	250	9	13	3,131	2,991
66. Ante-natal and child welfare consultations ...	...	69	69	...	2	1,514	1,327
67. Normal deliveries in- cluding born before admission ...	...	486	486	11	2	486	...
Total ...	248	6,011	6,259	357	244	84,872	82,260

